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EXAMINER	
PADMANABHAN, KAVITA	

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,758	RISING ET AL.	
	Examiner	Art Unit	
	Kavita Padmanabhan	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-108* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-108* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/22/01* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/3/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-108 have been examined.

2. Claims 1-108 have been rejected.

Priority

3. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Specification

4. The abstract of the disclosure is objected to because it consists of more than 150 words. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities:

Figure 1, reference character 100 of the drawings is not discussed in the specification.

Figure 2A, reference characters 211, 221, 231, 241, and 245 of the drawings are not discussed in the specification.

Figure 3C, reference character 337 of the drawings is not discussed in the specification.

Figure 3E, reference character 363 of the drawings is not discussed in the specification.

Figure 3F, reference character 390 of the drawings is not discussed in the specification.

Figure 4F, reference characters 483, 488, and 487 of the drawings are not discussed in the specification.

Figure 4C, reference character 435 of the drawings is not discussed in the specification.

Figure 4E, reference characters 465, 472, and 473 of the drawings are not discussed in the specification.

Figure 5C, reference character 541 of the drawings is not discussed in the specification.

Figure 6, reference characters 600 and 611 of the drawings are not discussed in the specification.

Figure 7A, reference character 1 of the drawings is not discussed in the specification.

Reference character "61" of Figure 7B has been used to designate both a display controller and a digital image input device, and has been discussed in reference to both these parts at page 28, lines 15 and 20 of the specification.

The extra period should be removed after "(DDL)." At page 3, line 18.

Appropriate correction is required. The citations above are not meant to be exhaustive, and are provided as examples. The applicant is advised to correct other similar errors as required throughout the specification.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1, reference character 100, Figure 2A, reference characters 211, 221, 231, 241, and 245, Figure 3C, reference character 337, Figure 3E, reference character 363, Figure 3F, reference character 390, Figure 4F, reference characters 483, 488, and 487, Figure 4C, reference character 435, Figure 4E, reference characters 465, 472, and 473, Figure 5C, reference character 541, Figure 6, reference characters 600 and 611, Figure 7A, reference character 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "61" of Figure 7B has been used to designate both a

display controller and a digital image input device. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 19-36 and 73-90** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 19-36 and 73-90 are not limited to tangible embodiments. In view of applicant's disclosure, specification page 28, line 22 – page 29, line 4, the computer-readable medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., magnetic hard disk, optical disk, etc.) and intangible embodiments (e.g., carrier wave, etc.). As such, the claims are not limited to statutory subject matter and are therefore non-statutory.

The examiner will apply prior art to these claims as best understood, with the assumption that applicant will amend to overcome the stated 101 rejections.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. **Claims 1-5, 7-8, 10, 12-14, 16, 19-23, 25-26, 28, 30-32, 34, 37-41, 43-44, 46, 48-50, 52, 55-59, 61-62, 64, 66-68, 70, 73-77, 79-80, 82, 84-86, 88, 91-95, 97-98, 100, 102-104, and 106** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Girardot et al. (US 6,883,137, hereinafter "Girardot") in view of **Applicant's Admitted Prior Art** (page 4 of applicant's specification, hereinafter "APA") and **Hind et al.** (US 6,904,562, hereinafter "Hind").

In regards to **claim 1**, **Girardot** teaches a computerized method for encoding an instance document representing a content description comprising determining a context node in the content description **(Girardot; col. 6, lines 32-34; Fig. 1, ref character 110)** and obtaining a schema defining the attributes and elements for the context node, with the attributes and elements having an order **(Girardot; col. 4, lines 24-27, 50-52; col. 5, lines 1-2, 37; col. 6, lines 21-24, 32-34; Fig. 1, ref character 110)**.

Girardot does not expressly teach the schema defining required elements and optional elements or creating sections for required and optional elements and attributes. **APA** teaches certain elements being optional **(APA; p4, lines 1-2)**. **Hind** teaches storing different types of information of the XML document in different sections of the encoded mXML document **(Hind; Fig. 4C; col. 8, lines 61-65; col. 9, line 24-64)**.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include optional elements, as disclosed by APA, in the schema of Girardot, to allow greater flexibility in the schema definition **(Hind; col. 1, line 66 – col. 2, line 9)**, and to store each of required elements, optional elements, required attributes, and optional attributes in specific sections of the encoded document, as suggested by Hind, to allow more efficient parsing of the document **(Hind; col. 1, line 66 – col. 2, line 9)**.

In regards to **claims 2 and 7**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including a section in the encoded document that indicates which elements and attributes exist in the xml document, obviously including the optional attributes and the optional elements since the entire xml document is being encoded, and this section constitutes a header in that it is located before the actual element or attribute data **(Hind; Fig. 4C; col. 11, lines 29-57)**.

In regards to **claims 3 and 8**, **Girardot, APA, and Hind** teach the computerized method of claim 2 and 7, respectively. **Hind** further teaches using special indicator values in the encoded document in certain cases to represent processing instructions **(Hind; col. 13, lines 28-34)**. **Girardot** further teaches that the order of attributes need not be strictly ordered in an xml document **(col. 4, lines 34-38)**. It would have been obvious to include a special processing instruction indicator, as disclosed in Hind, to denote whether or not the attributes and elements are in the same order as listed in the schema in order to allow the encoded document to be processed more efficiently **(Hind; col. 9, lines 39-45, 57-61)**.

In regards to **claims 4 and 10**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including associating an attribute identifier with the value of each optional attribute present in the content description and associating an element identifier with the value of each optional element present in the content description **(Hind; Fig.**

4C; col. 9, line 24-64). **Hind** further teaches using special indicator values in the encoded document in certain cases to represent processing instructions **(Hind; col. 13, lines 28-34)**, and including a node/element count and an attribute list in the encoded xml document **(Hind; col. 3, lines 53-60)**. **Girardot** further teaches that the order of attributes need not be strictly ordered in an xml document **(col. 4, lines 34-38)**. It would have been obvious to include a special processing instruction indicator, as disclosed in Hind, to denote whether or not the attributes and elements are in the same order as listed in the schema. It also would have been obvious to calculate an attribute count, using the existing attributes, and an optional elements count separate from the overall node count, using the same method used to calculate the overall node count **(Hind; col. 9, lines 57-62)** along with the schema definition describing which elements are optional **(Girardot; col. 4, lines 24-27, 50-52; col. 5, lines 1-2, 37) (APA; p4, lines 1-2)**, in order to allow the encoded document to be processed more efficiently **(Hind; col. 9, lines 39-45, 57-62; col. 10, lines 4-10)**.

In regards to **claim 5**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including associating an element identifier with the value for a required element **(Hind; Fig. 4C; col. 9, lines 24-64)** if the schema defines a choice of values for the corresponding required element **(Girardot; col. 2, lines 61-64)**.

In regards to **claims 12, 13, 14, and 16**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including associating an element identifier with the

value of each required attribute, associating an attribute identifier with the value of each optional attribute, associating an element identifier with the value of each required element, and associating an element identifier with the value of each optional element present in the content description **(Hind; Fig. 4C; col. 9, lines 24-64)**.

Claims 19-23, 25-26, 28, 30-32, and 34 are rejected with the same rationale given for claims 1-5, 7-8, 10, 12-14, and 16, respectively.

Claims 37-41, 43-44, 46, 48-50, and 52 are rejected with the same rationale given for claims 1-5, 7-8, 10, 12-14, and 16, respectively.

In regards to **claims 55-59, 61-62, 64, 66-68, and 70**, which are directed to the reverse process, the decoding, of the method described in claims 1-5, 7-8, 10, 12-14, and 16, **Girardot, APA, and Hind** teach the computerized method of claims 1-5, 7-8, 10, 12-14, and 16. **Hind** further teaches decoding the encoded XML document using a reverse process **(Hind; Figs. 5 and 7)**. Therefore, it would have been obvious to use a reverse decoding process to convert an encoded xml document into the original xml document in order to allow human-friendly viewing and editing of the document from its source file **(Hind; col. 8, lines 27-32)**.

Claims 73-77, 79-80, 82, 84-86, and 88 are rejected with the same rationale given for claims 55-59, 61-62, 64, 66-68, and 70, respectively.

Claims 91-95, 97-98, 100, 102-104, and 106 are rejected with the same rationale given for claims 55-59, 61-62, 64, 66-68, and 70, respectively.

13. **Claims 6, 9, 11, 15, 17, 24, 27, 29, 33, 35, 42, 45, 47, 51, 53, 60, 63, 65, 69, 71, 78, 81, 83, 87, 89, 96, 99, 101, 105, and 107** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Girardot, APA, and Hind**, and further in view of **Li et al.** (US 6,772,180, hereinafter "Li').

In regards to **claim 6**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including delimiters to indicate the start and termination of different nodes/elements and attributes **(Hind; col. 9, lines 46-61; col. 10, line 44 – col. 11, line 7; Fig. 4C)**. Girardot, APA, and Hind do not expressly teach a schema defining boundless sequences. **Li** teaches a schema defining repeating elements **(Li; col. 8, lines 11-14)**. Therefore it would have been obvious to use the delimiter disclosed by Hind to indicate the termination of a repeating, or boundless, element, as disclosed by Li, just as with all of the elements, in order to allow efficient processing of the encoded document **(Hind; col. 9, lines 46-61)**.

In regards to **claims 9, 11, and 17**, **Girardot, APA, and Hind** teach the computerized method of claim 7, 10, and 16, respectively. Girardot, APA, and Hind do

not expressly teach a schema defining elements with multiple occurrences. **Li** teaches a schema defining repeating elements **(Li; col. 8, lines 11-14)**. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to base the xml document on a schema defining repeating elements, as disclosed by Li, which would therefore result in associating a repeat field with the value of an optional element in the encoded document, based on the teachings of Girardot, APA, and Hind, thereby indicating to the parser that an element has multiple occurrences **(Hind; col. 9, lines 39-45, 57-61)**. To clarify, if an optional element has multiple occurrences, the repeat field would consist of the data values associated with every subsequent occurrence of the element after the first, in that they are repeat fields, or repeat values, of the same element type/tag and would only exist in cases where the element has multiple occurrences. However, even in this scenario, even if a value corresponds to an element that has multiple occurrences, each value would only be associated with one element identifier, since each occurrence of an element is listed individually **(Hind; Fig. 4C; lines 24-64)**.

In regards to **claim 15**, **Girardot, APA, and Hind** teach the computerized method of claim 14, including delimiters to indicate the start and termination of different nodes/elements and attributes **(Hind; col. 9, lines 46-61; col. 10, line 44 – col. 11, line 7; Fig. 4C)**. Girardot, APA, and Hind do not expressly teach a schema defining boundless sequences. **Li** teaches a schema defining repeating elements **(Li; col. 8, lines 11-14)**. Therefore it would have been obvious to use the delimiter disclosed by

Hind to indicate the termination of a repeating, or boundless, element, as disclosed by Li, just as with all of the elements, in order to allow efficient processing of the encoded document **(Hind; col. 9, lines 46-61)**.

Claims 24, 27, 29, 33, and 35 are rejected with the same rationale given for claims 6, 9, 11, 15, and 17, respectively.

Claims 42, 45, 47, 51, and 53 are rejected with the same rationale given for claims 6, 9, 11, 15, and 17, respectively.

In regards to **claims 60, 63, 65, 69, and 71**, which are directed to the reverse process, the decoding, of the method described in claims 6, 9, 11, 15, and 17, respectively, **Girardot, APA, Hind, and Li** teach the computerized method of claims 6, 9, 11, 15, and 17. **Hind** further teaches decoding the encoded XML document using a reverse process **(Hind; Figs. 5 and 7)**. Therefore, it would have been obvious to use a reverse decoding process to convert an encoded xml document into the original xml document in order to allow human-friendly viewing and editing of the document from its source file **(Hind; col. 8, lines 27-32)**.

Claims 78, 81, 83, 87, and 89 are rejected with the same rationale given for claims 60, 63, 65, 69, and 71, respectively.

Claims 96, 99, 101, 105, and 107 are rejected with the same rationale given for claims 60, 63, 65, 69, and 71, respectively.

14. **Claims 18, 36, 54, 72, 90, and 108** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Girardot, APA, and Hind**, and further in view of **Dodrill et al.** (US 6,901,431, hereinafter Dodrill).

In regards to **claim 18**, **Girardot, APA, and Hind** teach the computerized method of claim 1, including a user requesting an XML document/context node to be encoded **(Girardot; col. 6, lines 32-34)**. Girardot, APA, and Hind do not expressly teach a reset field specifying a different context node/document to be encoded. Dodrill teaches a user interface with an entry box wherein the user can enter an XML file name to be processed **(Dodrill; col. 10, lines 15-17; Fig. 4)**. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow the user to request the xml document to process, as disclosed by Girardot, using the entry field of Dodrill, in order to provide a user-friendly interface for a user to specify files to process **(Dodrill; col. 10, lines 15-17)**.

Claim 36 is rejected with the same rationale given for claim 18.

Claim 54 is rejected with the same rationale given for claim 18.

In regards to **claim 72**, which is directed to the reverse process, the decoding, of the method described in claim 18, **Girardot, APA, and Hind and Dodrill** teach the computerized method of claim 18. **Hind** further teaches decoding the encoded XML document using a reverse process **(Hind; Figs. 5 and 7)**. Therefore, it would have been obvious to use a reverse decoding process to convert an encoded xml document into the original xml document in order to allow human-friendly viewing and editing of the document from its source file **(Hind; col. 8, lines 27-32)**.

Claim 90 is rejected with the same rationale given for claim 72.

Claim 108 is rejected with the same rationale given for claim 72.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kavita Padmanabhan** whose telephone number is **571-272-8352**. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 2, 2005

UYEN LE
PRIMARY EXAMINER